



Item Unique Identification (IUID)

Presented to JSA/LWCG
18 July 2013



IUID Overview Topics

- Target Population
- IUID Marking Updates
- IUID CONOPS
- IUID Update
- DoD Integrated Schedule
- Service Schedules
- MIL STD 130&129 IUID related changes
- Registry Status
- Next Steps

**4140.01 Manual
Estimated Publication:
September 2013**



Target Population

- **Target population of items aligns with the Joint Logistics Board (JLB) approved Task Force recommendation**

Current marking focus:

- Major end items
- Small arms
- Nuclear Weapon Related Materiel (NWRM)
- Government Furnished Property (GFP)

Opportunistic marking:

- Depot level reparable
- Sensitive and classified items
- Critical safety items
- Pilferable items
- Other items as determined by item or program manager

Mark what needs to be marked



DoD Cumulative Item Marking Totals - as of April 2013

CLASS II (Individual Equipment)			CLASS V (Ammunition)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	824,369	N/A	New Procurement	52,708	N/A
Legacy	342,283	15,627,736	Legacy	47,663	889,730
Total	1,166,922	15,627,736	Total	100,371	889,730
Percentage of Total Marked		7%	Percentage of Total Marked		10%
Percentage of Total Remaining		93%	Percentage of Total Remaining		90%
CLASS VII (Small Arms)			CLASS VII (Non Small Arms)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	893,705	N/A	New Procurement	2,271,644	N/A
Legacy	967,596	1,210,859	Legacy	1,517,877	5,581,197
Total	1,861,301	1,210,859	Total	3,789,521	5,581,197
Percentage of Total Marked		61%	Percentage of Total Marked		40%
Percentage of Total Remaining		39%	Percentage of Total Remaining		60%
CLASS VIII (Medical Materiel)			CLASS IX (Consumables & Reparables)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	125	N/A	New Procurement	786,364	N/A
Legacy	27,273	97,249	Legacy	343,019	33,426,984

Represents 12% of assets marked across all classes of supply.
DoD roll up is based on Component input to date. The Components continue to refine their methods of data collection.



Army Cumulative Item Marking Totals – as of April 2013

CLASS II (Individual Equipment)			CLASS V (Ammunition)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	318,938	N/A	New Procurement	52,708	N/A
Legacy	30,841	928,533	Legacy	47,518	889,730
Total	349,779	928,533	Total	100,226	889,730
Percentage of Total Marked		27%	Percentage of Total Marked		11%
Percentage of Total Remaining		73%	Percentage of Total Remaining		89%
CLASS VII (Small Arms)			CLASS VII (Non Small Arms)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	856,866	N/A	New Procurement	1,149,036	N/A
Legacy	496,090	1,104,707	Legacy	330,049	2,147,621
Total	1,361,956	1,104,707	Total	1,479,085	2,147,621
Percentage of Total Marked		55%	Percentage of Total Marked		41%
Percentage of Total Remaining		45%	Percentage of Total Remaining		59%
CLASS VIII (Medical Materiel)			CLASS IX (Consumables & Reparables)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	124	N/A	New Procurement	763,142	N/A
Legacy	273	47,855	Legacy	220,930	2,697,848



Navy Cumulative Item Marking Totals - as of April 2013

CLASS II (Individual Equipment)			CLASS V (Ammunition)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	TBD	N/A	New Procurement	TBD	TBD
Legacy	TBD	13,600,000	Legacy	TBD	TBD
Total		13,600,000	Total	TBD	TBD
Percentage of Total Marked		0%	Percentage of Total Marked		
Percentage of Total Remaining		100%	Percentage of Total Remaining		
CLASS VII (Small Arms)			CLASS VII (Non Small Arms)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	TBD	TBD	New Procurement	TBD	N/A
Legacy	TBD	TBD	Legacy	15,000	430,000
Total	TBD	TBD	Total	15,000	430,000
Percentage of Total Marked			Percentage of Total Marked		3%
Percentage of Total Remaining			Percentage of Total Remaining		97%
CLASS VIII (Medical Materiel)			CLASS IX (Consumables & Reparables)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	TBD	N/A	New Procurement	TBD	N/A
Legacy	27,000	44,000	Legacy	TBD	21,800,000
Total	27,000	44,000	Total	TBD	21,800,000
Percentage of Total Marked		0%	Percentage of Total Marked		0%
Percentage of Total Remaining		100%	Percentage of Total Remaining		100%

Navy is working to establish enterprise reporting capability



USMC Cumulative Item Marking Totals - as of April 2013

CLASS II (Individual Equipment)			CLASS V (Ammunition)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	5,701	N/A	New Procurement	0	N/A
Legacy	297,939	412,706	Legacy	0	0
Total	303,640	412,706	Total	0	0
Percentage of Total Marked		42%	Percentage of Total Marked		
Percentage of Total Remaining		58%	Percentage of Total Remaining		
CLASS VII (Small Arms)			CLASS VII (Non Small Arms)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	23	N/A	New Procurement	17,939	N/A
Legacy	98,901	65,684	Legacy	305,037	526,955
Total	98,924	65,684	Total	322,976	526,955
Percentage of Total Marked		60%	Percentage of Total Marked		38%
Percentage of Total Remaining		40%	Percentage of Total Remaining		62%
CLASS VIII (Medical Materiel)			CLASS IX (Consumables & Reparables)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	1	N/A	New Procurement	23,222	N/A
Legacy	0	5,304	Legacy	6,330	3,044,006
Total	1	5,304	Total	23,222	3,044,006
Percentage of Total Marked		0%	Percentage of Total Marked		2%
Percentage of Total Remaining		100%	Percentage of Total Remaining		99%



Air Force Cumulative Item Marking Totals - as of April 2013

CLASS II (Individual Equipment)			CLASS V (Ammunition)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	500,000	N/A	New Procurement		N/A
Legacy	13,503	686,497	Legacy	145	0
Total	513,503	686,497	Total	145	0
Percentage of Total Marked		43%	Percentage of Total Marked		100%
Percentage of Total Remaining		57%	Percentage of Total Remaining		0%
CLASS VII (Small Arms)			CLASS VII (Non Small Arms)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked
New Procurement	27,816	N/A	New Procurement	1,104,669	N/A
Legacy	372,605	40,468	Legacy	867,791	2,451,621
Total	400,421	40,468	Total	1,972,460	2,451,621
Percentage of Total Marked		91%	Percentage of Total Marked		45%
Percentage of Total Remaining		9%	Percentage of Total Remaining		55%
CLASS VIII (Medical Materiel)			CLASS IX (Consumables & Reparables)		
	Currently Marked	Remaining to be Marked		Currently Marked	Remaining to be Marked

Air Force Class VIII items are tracked in a Joint System.
The mechanism to extract marking data is currently being defined.

Percentage of Total Marked		Percentage of Total Marked	2%
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DOD IUID CONOPS

- **IUID will be used to improve:**
 - **Accountability** - control of critical DoD assets to ensure security and safety, and valuation for audit readiness
 - **Readiness** - identification of “bad actor” items/vendors, more precise recalls, informed logistics support decisions
 - **Resources** - efficiencies in: labor, inventories, forecasting, warranty management, and targeted maintenance
 - **Lifecycle Management** - reliable data for engineering analysis, granularity of data for better item management, more accurate maintenance records
 - **Risk Reduction** - counterfeit item control, improved in-transit visibility, correct item information for better asset management
- ❑ **Develop DoD IUID Enterprise CONOPS - Q3FY14**



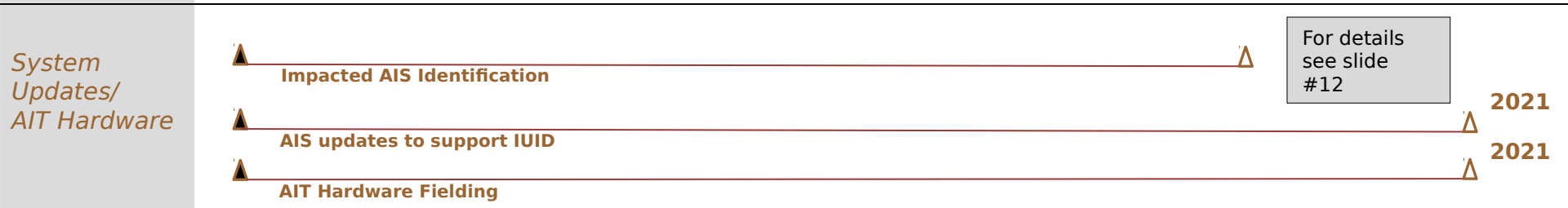
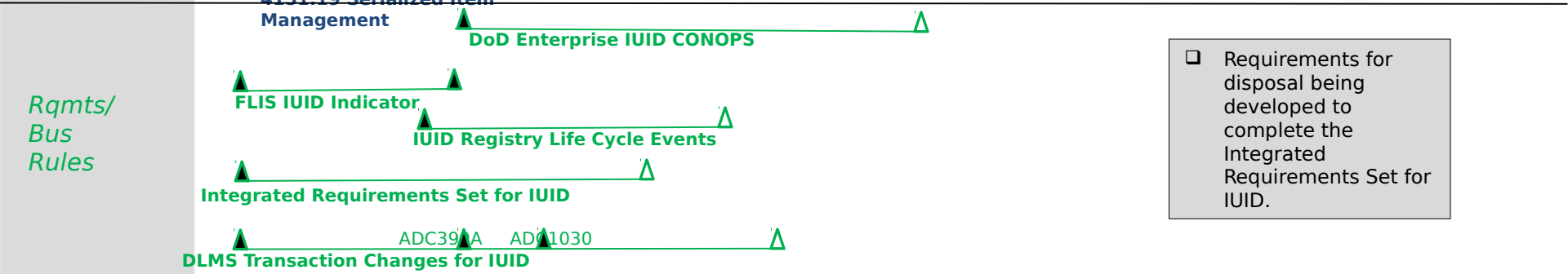
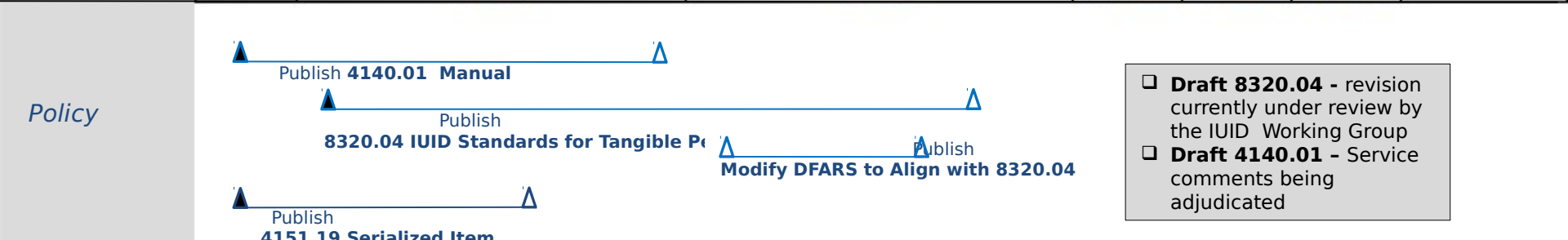
IUID Update

- ✓ **Received Service and DLA IUID implementation plans**
 - Population of items and marking timeline
 - Automated information systems (AIS) to be modified
 - Automatic identification technology (AIT) infrastructure requirements
 - ❑ Services and DLA continue to refine plan details
- ✓ **Developed DoD and Service level IUID integrated schedule**
 - ❑ Continue oversight and tracking of IUID implementation
- ✓ **Implemented and populated IUID indicator field in the Federal Logistics information System (FLIS)**
 - Standardized way to identify assets that require IUID
 - Triggers the inclusion of DFARS IUID contract clause
 - Prompts AIS to include unique item identifier in logistics transactions
 - ❑ Services and DLA to incorporate the field as part of AIS updates - see chart #11
 - ❑ Initial Navy and DLA submissions still needed (182,363 NIINs currently loaded with a "Y")
- ✓ **Developed standard transactions to share IUID data as assets move between DoD Components**
 - Unique item identifier (UII) added to electronic shipping notification and DD1348 (ADCs 399A & 1030)
 - ❑ Services and DLA to implement transactions in their AISs - Initial planning underway, ECD TBD
- ✓ **Updated MIL Standards for Item Marking and Packaging**
 - MIL STD 130 updated to address multiple serial numbers (published)
 - ❑ MIL STD 129 Updated to include UII on external packaging and link UII and Serial Nbr in Bar 10 Code (adjudicating comments)



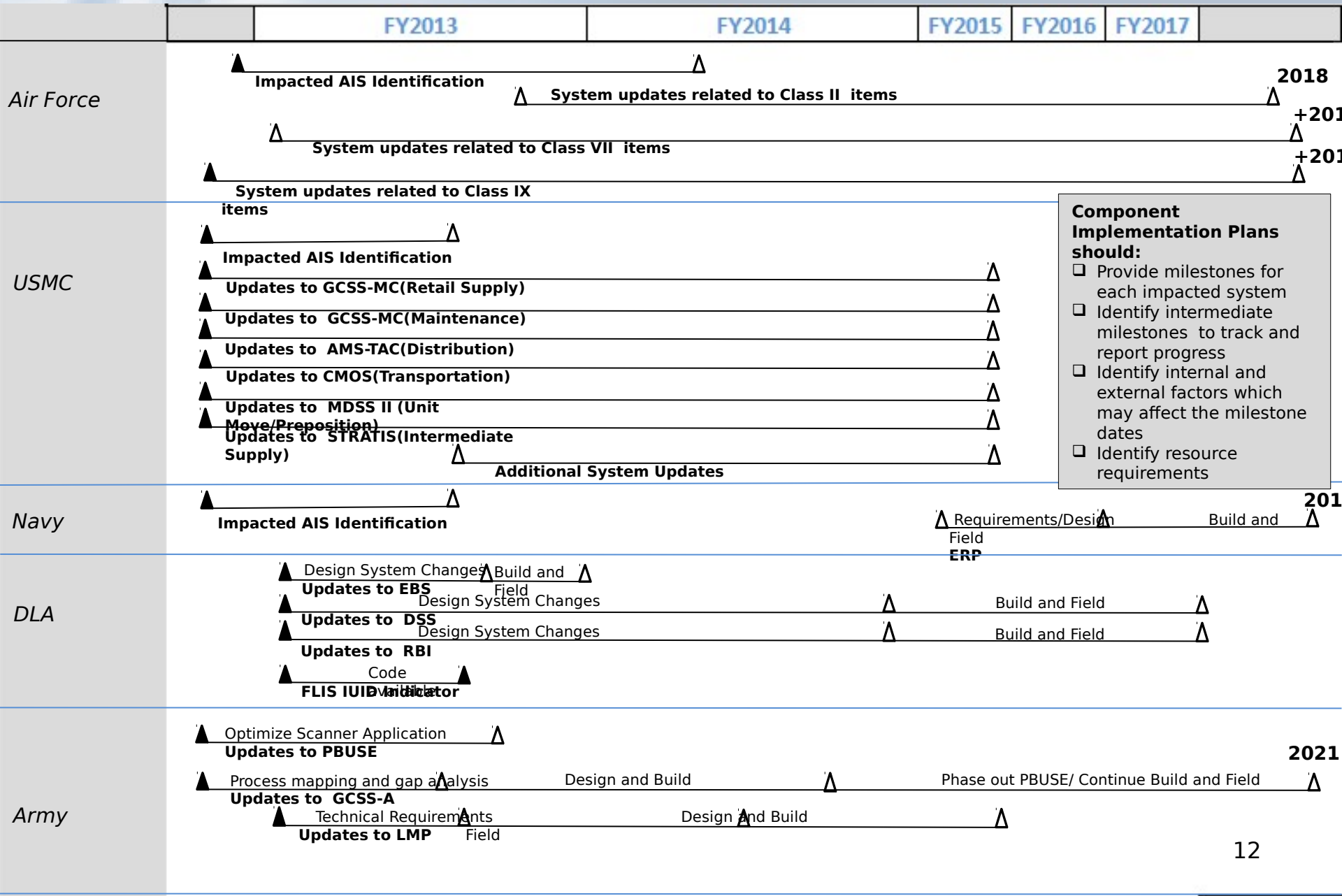
DOD IUID Integrated Schedule

	FY2013	FY2014	FY2015	FY2016	FY2017	
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DOD IUID Integrated Schedule - AIS Updates





DOD IUID Integrated Schedule - Item Marking

		FY2013	FY2014	FY2015	FY2016	FY2017			
Air Force	▲	Nonrecurring Engineering Analysis and Updates to Tec Data Packages for Class IX items					▲	All Class es 75% TBD	Marki ng End Date TBD
	▲	Opportunistic Marking	Pilot programs and Marking Teams						
		Mark Legacy Items - All Classes							
USMC		Class VII 70% Marked Class IX 3% Marked	Class VII 72% Class IX 3%	Class VII 72% Class IX 3%	Class VII 73% Class IX 3%	2019 Class VII 75% Class IX 4%	Marki ng End Date TBD		
	▲	Marking teams and opportunistic marking	▲	▲	▲	▲			
		Mark Legacy Items—Class VII & IX							
Navy	▲	Class VIII Legacy Item Marking					▲	2019	Marki ng End Date TBD
				▲	PMO Marking		▲	75% +	
				Class VII Legacy Item Marking					
	▲	Class II and IX Legacy Item Marking					▲		
		Opportunistic marking					▲		
DLA	▲	Equipment marked during inventory					▲		
		Mark Legacy Equipment							
Army	▲	Pilot programs and opportunistic marking	▲	Mobile marking teams deploy and mark legacy items			▲	All Class es 75% 2026	Marki ng End Date 2033
		Mark Legacy Items - All Classes					▲		

Component Marking Plans should provide, by class of supply:

☐ 75% marked and marking end dates

☐ Annual marking goals

☐ Prioritization Strategy

☐ Completion dates for Nonrecurring Engineering

☐ Quarterly progress reports



Army IUID Integrated Schedule

	FY2013	FY2014	FY2015	FY2016	FY2017	
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▲ Optimize Scanner Application
Updates to PBUSE ▲

▲ Process mapping and gap analysis
Updates to GCSS-A Design and Build ▲ Phase out PBUSE/ Continue Build and Field ▲

▲ Technical Requirements
Updates to LMP Field Design and Build ▲

AIT Hardware--Researching use of cell phones to limit the need for additional AIT purchases

Army Implementation Plan should:

- ☐ Identify intermediate milestones to track and report progress
- ☐ Identify internal and external factors that may affect milestone dates
- ☐ Identify resource requirements

▲ Identification of NSNs for Population of FLIS Indicator ▲

▲ Pilot programs and opportunistic marking
Mark Legacy Items ▲ Mobile marking teams deploy and mark legacy items

2026 2033
All All
Class Class
es es
75% 100%



Navy IUID Integrated Schedule

	FY2013	FY2014	FY2015	FY2016	FY2017	
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System Updates/
AIT Hardware

Navy Implementation Plan should:

- ☐ Provide details about the delay between system identification and implementing system changes
- ☐ Provide milestones for each impacted system
- ☐ Identify intermediate milestones to track and report progress
- ☐ Identify internal and external factors that may affect the milestone dates
- ☐ Identify resource requirements

▲ ▲
Impacted AIS Identification

▲ Requirements/Design and Fielding ERP ▲ Updates 202
▲ Requirements Determination AIT Fielding ▲ Fielding

Legacy Marking

▲ Identification of NSNs for Population of FLIS Indicator ▲

Navy Marking Plan should provide, by class of supply:

- ☐ 75% marked and marking end dates
- ☐ Annual marking goals
- ☐ Prioritization Strategy
- ☐ Completion dates for Nonrecurring Engineering
- ☐ Quarterly progress reports

▲ ▲
Class VIII Legacy Item Marking

▲ PMO Marking 2019
Class VII Legacy Item Marking ▲

▲ ▲
Class II and IX Legacy Item Marking Opportunistic marking

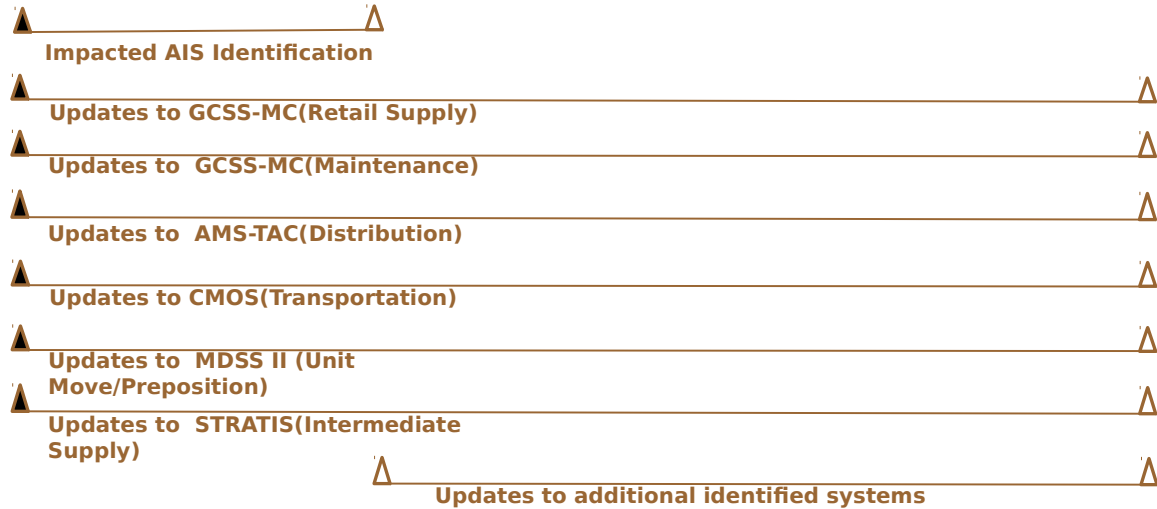
80% Marked
Marking End Date
2025 + TBD



USMC IUID Integrated Schedule

	FY2013	FY2014	FY2015	FY2016	FY2017	
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System Updates/
AIT Hardware



AIT Hardware has been fielded for the above systems except GCSS-MC.

- USMC Implementation Plan should:**
- ☐ Identify intermediate milestones to track and report progress
 - ☐ Identify internal and External factors which may affect the milestone dates.
 - ☐ Identify resource requirements
 - ☐ Interim milestones for identification of remaining AISs modifications
 - ☐ Provide a schedule for fielding of remaining AIT hardware

Legacy Marking

Identification of NAs for Population of FLIS Indicator



- USMC Marking Plan should:**
- ☐ Provide a timeline for remaining classes of supply



Air Force IUID Schedule

	FY2013	FY2014	FY2015	FY2016	FY2017	
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System Updates/
AIT Hardware

▲ Impacted AIS Identification ▲

Air Force Implementation Plan should:

- ☐ Provide Interim milestones for AIS identification process
- ☐ Provide AIS names and schedules for Class VII and IX modifications underway
- ☐ Identify Internal and External factors which may affect the milestone dates
- ☐ Identify resource requirements

▲ System updates related to Class II items ▲

▲ System updates related to Class VII items +201

▲ AIT fielding related to Class VII items +201

▲ System updates related to Class IX items +201

Legacy Marking

▲ Identification of ISNs for Population of FLIS Indicator

▲ Nonrecurring Engineering for Class VII items ▲

▲ Nonrecurring Engineering for Class IX items ▲

▲ Opportunistic Marking Pilot programs and Marking Teams

Mark Legacy Items

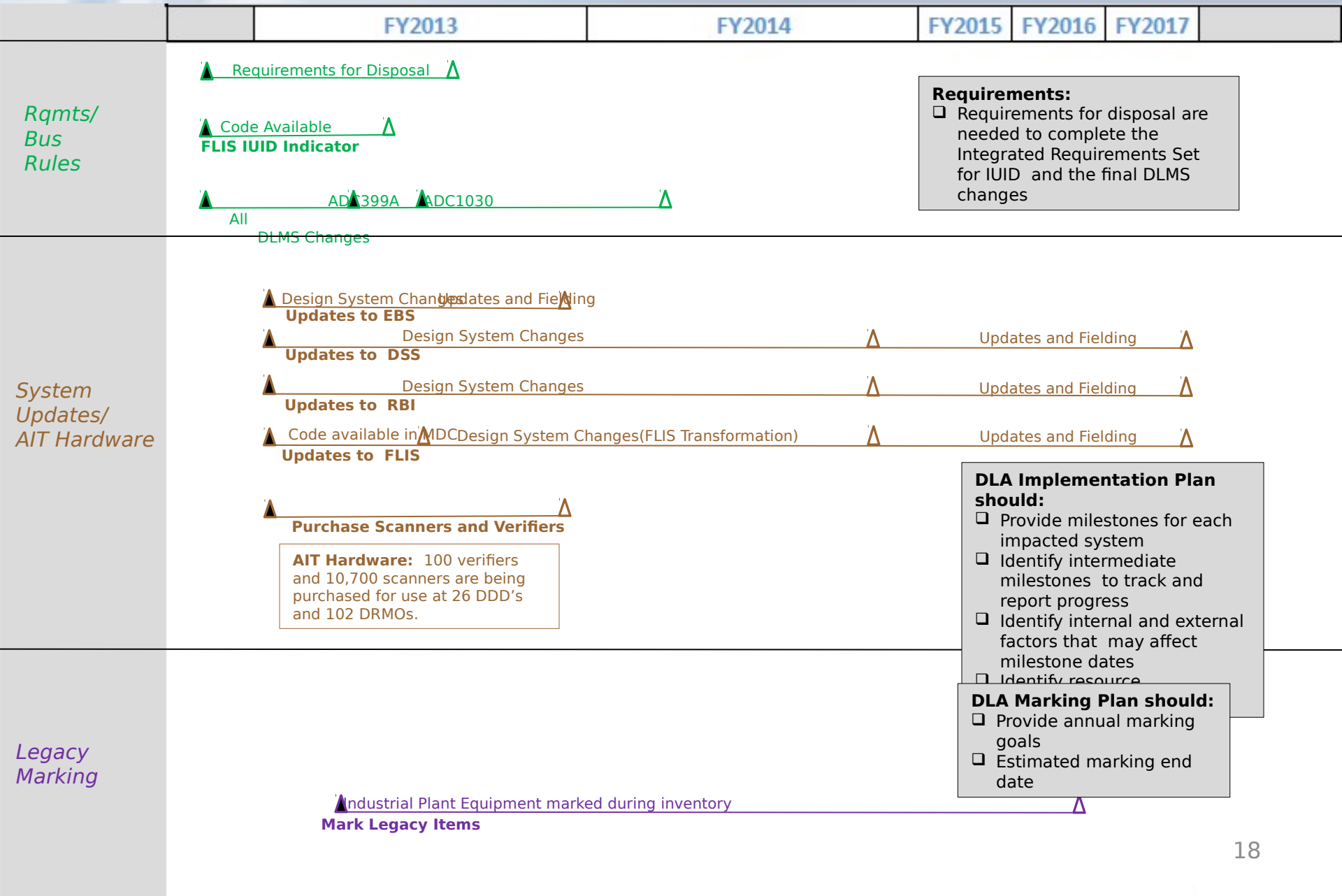
Air Force Marking Plan should:

- ☐ Provide, by class of supply, 75% marked and marking end dates
- ☐ Annual marking goals

All Class es Marking End Date
75%
TBD



DLA IUID Integrated Schedule





Background of IUID MIL STD 130 Change

- Sequential Tagging: A process used primarily for Legacy asset marking and by secondary suppliers. Sequentially numbered UIIs are created and printed. The data used to create the UII relates back to the entity creating the UII as opposed to the asset being marked. The UII applied to an asset is just the next label off the roll, and the association between the UII and the asset exists only when the UII is registered.
- Sequential Tag Serial Number: a sequence number used only to guarantee the uniqueness of the UII. It is the serial number of the UII, not the serial number of the asset.

Problem: Old MIL STD 130 allowed for two serial numbers to be marked on the item. The serial number of the asset and the serial number within the IUID, both labeled as Serial Number.



Old MIL STD 130 (Example)

Item made by World Wide Widgets

- Serial Number **WWW123**

||||| ||| |||
Ser No. WWW123

Item sold to Government by Defense Dynamic Distributors

Sequential UII Tag purchased from Top Tagging Technology

- UII: D1U2R7TES231TTT987654321

- UII Serial Number: **TTT987654321** (will be listed as pedigree serial number on the registry)

||||| ||| |||
Ser No. WWW123



• Old MIL STD 130

- Data Matrix Mark with below data: (human readable optional)

• Cage: 17V-1U2R7

• Part: P-TES231

• Serial: S- **TTT987654321**

Standard as written allowed for situation that causes confusion in the field.

now has **WWW123** and **TTT9876543321** identified as the item serial number
machine and human readable data

||||| ||| |||

Ser No.

WWW123



(17V) 1U2R7

(P) TES231

(S) **TTT987654321**

UII: D1U2R7TES231TTT987654321



MIL STD 130N change 1 (16-Nov-2012)

- New rule created to lessen confusion caused by the creation of a “serial number” during the “Sequential Tagging” UII process.

If the serial number used to derive the UII is not equal to any other serial number already marked on the item, the serial number used to derive the UII will not be marked on the item as discrete data in either human or machine readable form.



New MIL STD 130 (Example)

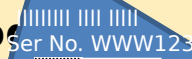
Item made by World Wide Widgets

- Serial Number WWW123



Item sold to Government by Defense Dynamic Distributors

Sequential UII Tag purchased from Top Tagging Technology



- UII: D1U2R7TES231TTT987654321

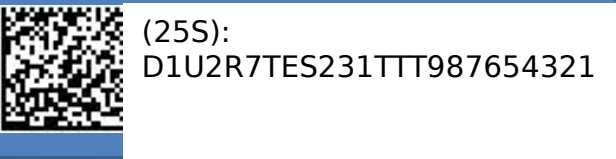
- UII Serial Number: TTT987654321 (will be listed as pedigree serial number on the registry)

• Apply New MIL STD 130 Rule to create tag for the Item

- Since TTT987654321 not equal WWW123, 987654321 cannot be marked on item as discrete data(machine or human readable)

- Data Matrix encoded with below data:

- Complete UII: 25S - D1U2R7TES231TTT987654321
- Serial Number: S- WWW123 (optionally included as additional data in mark and on data plate)



UII: D1U2R7TES231TTT987654321



Suggested IUID related **changes** to Draft MIL STD 129 Revision P, Change 4

The DoD is transitioning to life cycle management of serialized items through programs for item unique identification (IUID) and serialized item management (see Table III for term definitions). To further enable those processes, the unique identification marking in this standard is changed to include the following:

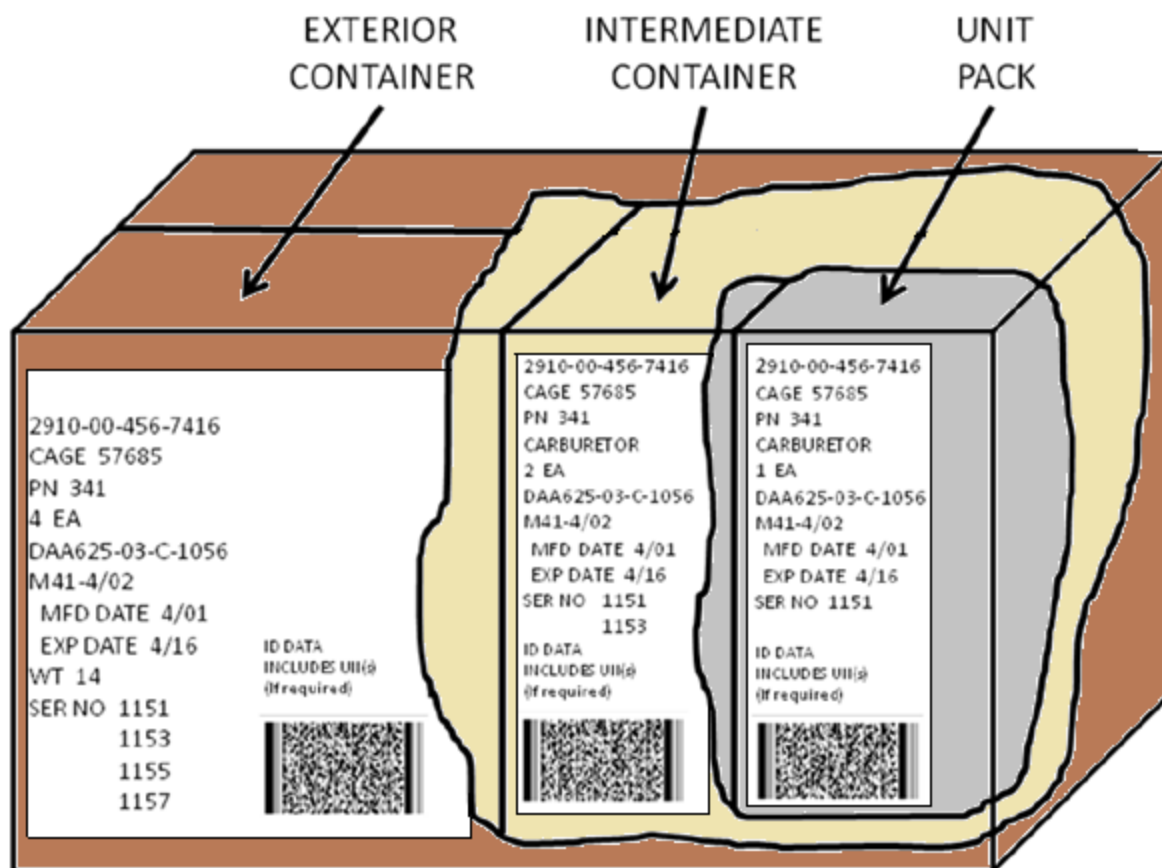
- Each unit pack, container, or palletized unit load will include **linked** Serial Number and UII data.
- Packaging Bar Codes will now link the UIIs and Serial Numbers
- Serial number lists and UII number lists are required if ~~the information is not included in the package identification bar code marking~~ **more than 5 items. PDF417 bar code required on list.**
- If a single two-dimension (PDF417) bar code cannot accommodate all the information for the included item information, a set of Macro PDF417 bar codes encode the identification information and the UII information. See Appendix A.
- **Assorted package will not contain UII/Serial Number data on main label. UII/Serial Number data will be available at highest level packaging containing like NSN items**

Suggested Changes to the draft are in **RED**



Unit Pack, Container, Palletized Load

The serialized numbers marked on each unit pack, container, or palletized unit load include all of the unique item identifiers (UII) and assigned serial numbers.





Linking the UII and Serial Number within the Bar Code

- ISO/IEC 15434 Format 06 envelopes are used to associate line item specific data (e.g. document number, NSN, quantity, serial number, UII, etc.). The Format 06 envelopes may be used for military shipping label data associations and the Format 06 envelopes are used for serialized item number association.
- With in this label the 25s DI will be used to identify the complete UII regardless of construct type.



PDF417 required on UII/Serial Nbr lists

Serial number lists (if more than 5 items) and UII number lists are required ~~if the information is not included in the package identification bar code marking.~~ If list contains UIIs PDF417 bar code required. UIIs will not be printed in human readable.



Multiple Macro PDF417

- If a single two-dimension (PDF417) bar code cannot accommodate all the information for the included item information, a set of Macro PDF417 bar codes encode the identification information and the UII information. See





Assorted Pack(multiple NSNs.)

- Will not contain UII/Serial Number data on main label. UII/Serial Number data will be available at highest level packaging containing like NSN items



No change to basic serial number wording

Current MIL-STD-129P—No Change: "When an item is assigned a serial number, that number shall be applied and preceded by the abbreviation "SER NO""

Comment Period closed on June 21, 2013.

Comments currently being adjudicated.



IUID Registry Status

- **As of July 2013, population includes 22.4M records**
 - 14.8M new contract receipts
 - 6.9M legacy assets
 - 774K government furnished property (GFP) assets
 - Growth rate of 60K UIDs per week
- **Approved enhancements - Q2FY14**
 - ☐ Mandatory population of Item Owner field post acceptance
 - ☐ Addition of National Stock Number (NSN) field as pedigree data
- **Proposed enhancement**
 - ☐ Mandatory Population of Human Readable Serial Number



Next Steps

- ❑ Publish 4140.01, DOD Supply Chain Materiel Management - Q1FY14
- ❑ Publish 4151.19, Serialized Item Management for the Lifecycle Management of Materiel - Q4FY13
- ❑ Publish 8320.04, IUID Standards for Tangible Personal Property - Q4FY14
- ❑ Develop DoD Enterprise IUID CONOPS - Q3FY14
- ❑ Complete Integrated Requirements Set for IUID - Q1FY14
 - ❑ Incorporate flows for disposal
 - ❑ Add business rules for items that require greater traceability (UIT)
- ❑ Implement IUID registry enhancements - Q1FY14
- ❑ Continue quarterly legacy marking progress updates - Q4FY13
- ❑ Continue oversight and tracking of IUID implementation



Working Group Leads

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DLA

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